STROKE "NSRC" RECEIVING CENTERS

PURPOSE

To provide developing guidelines to rapidly transport stroke patients who access the 9-1-1 system to a designated Neurovascular Stroke Receiving Center (NSRC) when indicated. Patients transported to NSRC will benefit from rapid assessment, intervention and treatment at a dedicated stroke specialty center. Patients will meet the defined criteria for triage as an acute ischemic or hemorrhagic cerebral vascular event. **At the present time, this policy is limited to the San Bernardino County area.**

DEFINITIONS

1. **Neurovascular Stroke Receiving Centers (NSRC):** ICEMA designated Level I or Level II receiving hospital for patients triaged as having a cerebral vascular event requiring hospitalization for treatment, evaluation and/or management of this event.

2. **NSRC Level I (NSRC-I)**: A twenty-four (24) hours per day, seven (7) days per week acute care hospital that has successfully completed and maintains The Joint Commission (TJC) or Healthcare Facilities Accreditation Program (HFAP) accreditation as a Primary Stroke Center, **has interventional neuroradiologic and neurosurgical capabilities** and enters into a memorandum of understanding with ICEMA relative to being a Stroke Center.

3. **NSRC Level II (NSRC-II)**: A twenty-four (24) hours per day, seven (7) days per week acute care hospital that has successfully completed and maintains The Joint Commission (TJC) or Healthcare Facilities Accreditation Program (HFAP) accreditation as a Primary Stroke Center and enters into a memorandum of understanding with ICEMA relative to being a Stroke Center.

4. **Neurovascular Stroke Referral Hospital(s) (NSRH)**: General acute care hospitals that refer possible stroke patients to NSRC.

5. **Neurovascular Stroke Base Station(s)**: Facilities that have TJC or HFAP Primary Stroke Center accreditation that also function as a Paramedic Base Station.

6. **TJC**: The Joint Commission.

7. **HFAP**: Healthcare Facilities Accreditation Program.

8. **Interventional Neuroradiologic capabilities**: Facilities with qualified interventional radiologists and/or neurosurgeons able to administer inter-arterial tissue plasminogen activator and/or perform mechanical clot retrieval.

9. **CQI**: Continuous Quality Improvement.

10. **EMS**: Emergency Medical Services.

11. **CE**: Continuous Education**.**

12. **mLAPSS**: Modified Los Angeles County Prehospital Stroke Screening Scale.

POLICY

The following requirements must be met for a hospital to be an ICEMA designated NSRC-I or NSRC-II:

1. An ICEMA approved paramedic receiving hospital which is a full service acute care facility.

2. Accreditation as a Primary Stroke Center by TJC or HFAP and proof of re-accreditation every two (2) years.

3. A facility alert system for incoming stroke patients available twenty-four (24) hours per day, seven (7) days per week (i.e. in-house paging system).

4. Provide CE opportunities for NSRC, NSRH and EMS personnel in areas of pathophysiology, assessment, triage and management for stroke patients and report annually to ICEMA.

5. Lead public stroke education efforts at the appropriate educational level and report annually to ICEMA.

STAFFING REQUIREMENTS

The hospital will have the following positions filled prior to becoming a NSRC-I or NSRC-II:

1. <u>Medical Directors</u>

   The hospital shall designate two (2) physicians with hospital privileges as co-directors of its NSRC program. One (1) physician shall be Board-certified or Board-eligible by the American Board of Medical Specialties or American

Osteopathic Association, neurology or neurosurgery board. The co-director shall be a Board-certified or Board-eligible emergency medicine physician.

2. Nursing Coordinator

The hospital shall designate a NSRC Nursing Coordinator who has experience in critical care or emergency nursing, and who has advanced education in stroke physiology or at least has two (2) years' dedicated stroke patient management experience. Certification in critical care or emergency nursing is preferred.

3. On-Call Physicians Specialists / Consultants

A daily roster of the following on-call physician consultants and staff must be promptly available within thirty (30) minutes of notification of "Stroke Alert" twenty-four (24) hours per day, seven (7) days per week.

a. Radiologist experienced in neuroradiologic interpretations.

b. On-call Neurologist available twenty-four (24) hours per day; seven (7) days per week.

c. Additional requirements for:

NSRC-I

1) Interventional Neuroradiologist or Interventional vascular neurosurgeon and an angiogram suite available twenty-four (24) hours per day; seven (7) days per week.

2) Neurosurgeon available twenty-four (24) hours per day; seven (7) days per week.

NSRC-II

1) For NSCR-II designation only, ICEMA will waive the on–call neurologist requirement, for tele-neurology, upon submission of the following written documentation:

- Assessment of geographic and/or population based need.
- Demonstration of active planning to obtain a twenty-four (24) hours per day; seven (7) days per week call-panel of neurologists.
- Assurance of an in-person neurologist's evaluation of stroke patients within twelve (12) hours of hospital admission.
- Assurance of 100% QI of all tele-neurology patients.

Request for waiver must be re-submitted and re-evaluated by ICEMA every twelve (12) months.

2) If neurosurgical services are not available in-house, the facility must have a rapid transfer agreement in place with a facility that provides this service. The agreement must be on file with the ICEMA. NSRC-I's must promptly accept rapid transfer requests from NSRC-II's. Additionally, the facility must have a rapid transport agreement in place with an ICEMA permitted transport agency for that EOA.

INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

1. Stroke Team alert response policy upon EMS notification of a "Stroke Alert".

2. Rapid assessment of stroke patient by Emergency and Neurology teams.

3. Prioritization of ancillary services including laboratory and pharmacy with notification of "Stroke Alert".

4. Arrangement for priority bed availability in Acute Stroke Unit or Intensive Care Unit (ICU) for "Stroke Alert" patients.

   Acknowledges that stroke patients may **only** be diverted during the times of Internal Disaster in accordance to protocol #8060 *Requests for Hospital Diversion*, (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues i.e. bomb threat, earthquake damage, hazardous material or safety and security of the facility.) A written notification describing the event must be submitted to ICEMA within twenty-four (24) hours.

5. Additional requirements for:

NSRC-I

a. Emergent thrombolytic and mechanical therapy protocol to be used by Neurology, Emergency, Pharmacy, Interventional and Critical Care teams.

b. Maintaining readiness of diagnostic computed tomography (CT), magnetic resonance imaging (MRI) and therapeutic resources such as an interventional suite upon notification of Stroke Team.

c. Prompt acceptance of stroke patients from any NSRH as well as referral from NSRC-II to NSRC-I when interventional skills are required.

NSRC-II
a. Emergent thrombolytic and tele-neurology (if waiver is approved) protocol to be used by Neurology, Emergency, Pharmacy and Critical Care teams. b. Maintaining readiness of diagnostic computed tomography (CT), upon notification of Stroke Team.

DATA COLLECTION

Data will be reported to the ICEMA Medical Director on a monthly basis using an ICEMA approved registry.

CONTINUOUS QUALITY IMPROVEMENT PROGRAM

NSRC shall develop an on-going CQI program which monitors all aspects of treatment and management of stroke patients and identifies areas needing improvement. At a minimum, the program will monitor the following parameters:

1. Morbidity and mortality related to procedural complications.

2. Tracking door to intervention times and adherence to minimum performance standards.

   ICEMA will utilize current Get with the Guidelines (GWTG) performance indicators. Any specific or additional performance indicators will be determined in collaboration with the Stroke CQI Committee.

3. Active participation in ICEMA Stroke CQI Committee activities.

PERFORMANCE STANDARDS

Compliance with the American Stroke Association Performance Measures as a Primary Stroke Center.

DESIGNATION

1. The NSRC applicant shall be designated by ICEMA after satisfactory review of written documentation, a potential site survey and completion of an agreement between the hospital and ICEMA.

2. Documentation of current accreditation as a Primary Stroke Center by TJC or HFAP shall be accepted in lieu of a formal site visit by ICEMA.

3. Initial designation as a NSRC shall be for a period of two (2) years. Thereafter, redesignation shall occur every two (2) years contingent upon satisfactory review.

4. Failure to comply with the agreement, criteria and performance standards outlined in this policy may result in probation, suspension or rescission of the NSRC designation.

PATIENT DESTINATION

1. The NSRC should be considered as the destination of choice if all of the following criteria are met:

    a. Stroke patients eligible for transport to NSRC (identified stroke patients) will be identified using the mLAPSS triage criteria.

    b. Identified acute stroke patients with "last seen normal" time plus transport time equaling greater than (8) eight hours or if "last seen normal" time is unknown, transport to the closest paramedic receiving hospital.

    c. Identified stroke patients with "last seen normal" time plus transport time between (3) three to (8) eight hours will be transported to NSRC-I.

    d. Identified stroke patients with "last seen normal" time plus transport time less than (3) hours will be transported to any closest NSRC-I or NSRC-II.

    e. NSRC Base Station contact is **mandatory** for all patients identified as a possible stroke patient.

    f. The NSRC base station is the only authority that can direct a patient to a NSRC. The destination may be changed at NSRC base station discretion.

    g. The NSRC base station, if different from the NSRC will notify the NSRC of the patient's pending arrival as soon as possible, to allow timely notification of Stroke Team.

    h. Air transport may be considered if ground transport is greater than thirty (30) minutes.

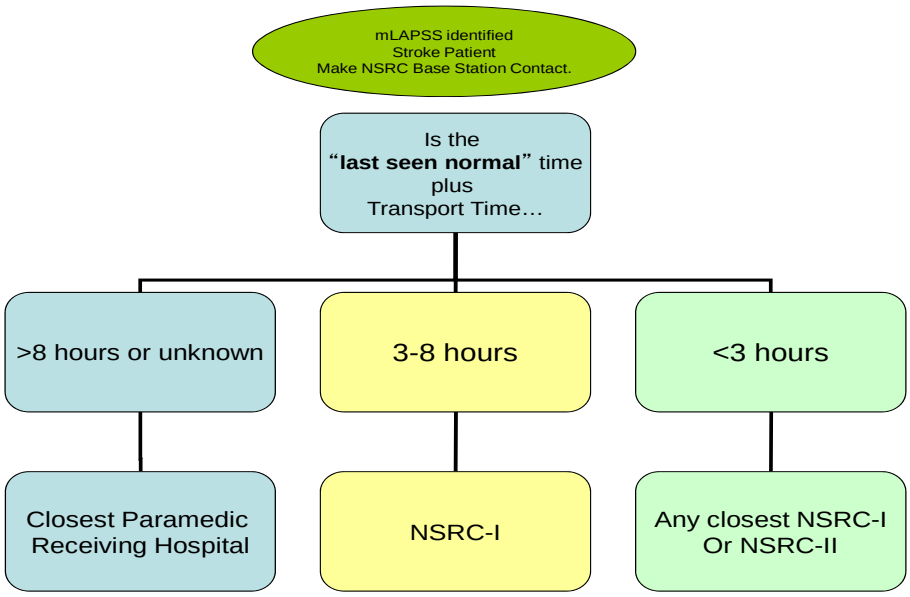
2. The following factors should be considered in determining choice of destination for acute stroke patients. NSRC base station contact and consultation is mandatory in these situations:

    a. Patients with unmanageable airway, unstable cardiopulmonary condition or in cardiopulmonary arrest should be transported to the closest paramedic receiving hospital.

b. Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to closest NSRC-I.

c. Patients with hemodynamic instability and exhibiting signs of inadequate tissue perfusion should be transported to the closest paramedic receiving hospital.

Stroke Patient Destination Decision Tree
(San Bernardino County Only)



Stroke Decision Tree